UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,833	05/04/2001	Eric D. Brill	M61.12-0346	3936

27366   7590   08/03/2005

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EXAMINER
SKED, MATTHEW J

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	09/849,833	BRILL ET AL.
	Examiner	**Art Unit**	
	Matthew J. Sked	2655	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _04/20/05_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-17_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-3,8,9,16 and 17_ is/are rejected.

7)☒ Claim(s) _4-7 and 10-15_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 1-17 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al.

(U.S. Pat. 5,768,603).

Brown teaches a computer-readable medium having computer-executable

instructions, comprising:

converting a corpus of sentences into at least two meaning sets using at least

two different natural language units (the first natural language unit creates a translation

model from alignments of two corpora and uses this model to generate a meaning set

(target structures) from the source text and a second natural language unit generates

source structures from the source text, Fig. 46, Fig. 7, elements 701, 702 and 706, col.

9, lines 46-53 and col. 10, lines 45-49); and

comparing the meaning sets to evaluate the performance of one or more of the at

least two natural language units (aligns the source and target structures and calculates

a probability score of each alignment, the score is an indication of the probability the

target structure is a correct translation hence an indication of the robustness of the

translation model, Fig. 24, col. 37, line 38 to col. 38, line 1).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-3, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Brown et al. (U.S. Pat. 5,768,603) in view of Baker (U.S. Pat. 6,122,613).

As per claim 1, Brown teaches a method of training a natural language unit

comprising:

generating a first meaning set from a first corpus using a first natural language

unit (the first natural language unit takes an input of a corpus (corpus 1 and corpus 2)

and creates a translation model from their alignments and uses this model to generate a

meaning set (target structures) from the source text, Fig. 46, Fig. 7, elements 702 and

706, and col. 9, lines 46-53);

generating a second meaning set from a second corpus using a second natural

language unit (generates source structures from the source text, Fig. 7, element 701

and col. 10, lines 45-49);

comparing the first meaning set to the second meaning set to generate a score

(aligns the source and target structures and calculates a probability score of each

alignment, Fig. 24 and col. 37, line 38 to col. 38, line 1); and

the score indicates a performance of the first natural language unit (the score is

an indication of the probability the target structure is a correct translation hence an

indication of the robustness of the translation model, col. 37, line 38 to col. 38, line 1).

Brown does not specifically teach using this score to further modify the first

natural language unit.

Baker teaches a system that uses a second natural language unit to further train

a first natural language unit by generating a score from two meaning sets and using this

score to adapt the first natural language unit (combiner generates a combined score

between real-time recognizer's candidates and the offline recognizer's candidates and

offline transcriptionist uses the scores to correct recognition errors and these

corrections are used to train or adapt the offline recognizer or the real-time recognizer,

col. 8, lines 39-50, col. 8, lines 57-60 and col. 9, lines 18-23).

It would have been obvious to one of ordinary skill in the art at the time of

invention to modify the system of Brown to use the score to modify the first natural

language unit as taught by Baker because it would allow an indication of the

effectiveness of the first natural language unit to be fed back hence allowing more

control over the robustness of the natural language unit.

6.   As per claims 2, 9 and 17, Brown teaches the first corpus comprises a corpus

written in a first language and the second corpus comprise the corpus written in a

second language (corpus 1 or corpus 2 must inherently be in a different language than

the source text in order to generate the target structures, col. 2, line 66 to col. 3, line 3,

line 5).

7.   As per claim 3, Brown teaches wherein the second corpus is aligned with the first

corpus (meaning sets are aligned, Fig. 24).

Allowable Subject Matter

8.   Claims 4-7 and 10-15 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

9.   The following is a statement of reasons for the indication of allowable subject

matter:

As per claim 4, Brown teaches performing a syntactic parse on a first corpus to

produce a set of syntactic parses (structures are parse trees, col. 37, lines 2-4).

Neither Brown nor Baker teaches performing a semantic interpretation of each

syntactic parse to produce a meaning set. It would not have been obvious to one of

ordinary skill in the art at the time of invention to modify the system of Brown and Baker

to arrive at the applicant's invention.

As per claims 5 and 10, neither Brown nor Baker teach generating another

meaning set from the first corpus using the first natural language unit and comparing

this meaning set to the second meaning set. It would not have been obvious to one of

ordinary skill in the art at the time of invention to modify the system of Brown and Baker

to arrive at the applicant's invention.

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Kitamura et al. (U.S. Pat. Pub. 2002/0152081A1), filed after the

current application, teaches generating two meaning sets from two different language

texts and uses a comparison between the meaning sets to adapt the dictionary.

Glickman et al. (U.S. Pat. 6,076,059) teaches aligning audio and text and adapting one

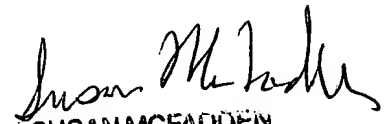of the processing units based upon the feedback.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Matthew J. Sked whose telephone number is (571) 272-

7627. The examiner can normally be reached on Mon-Fri (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

MS
07/27/05

SUSAN MCFADDEN
PRIMARY EXAMINER